ABSTRACT

Network endpoints using TCP/IP operate to determine the maximum transmission unit (MTU) of the path between them. This determination is done so as to avoid the expensive IP fragmentation that will occur when transitting links with a smaller MTU size. The standard method of determining the path MTU (PMTU) has several known deficiencies, including: inefficient use of bandwidth as proper operation will likely result in the loss of one or more packets and difficulty of implementation as the reverse channel communication mechanism, reception of ICMP messages indicating the discarding of unfragmentable packets, is frequently blocked by firewalls and other security apparatus.

A method of determining the PMTU between intermediate proxies is disclosed that does not require reception of ICMP messages or the inefficient use of bandwidth due to the presumed dropping of packets with valid data.